

REMARKS

I. Status of Claims

On page 2 of the Office Action, claims 1, 3-8, 10-15 and 17-23 were withdrawn as directed to a non-elected invention. Claims 2 and 16 are cancelled, not for reasons of patentability but in order to expedite prosecution of the application, and claims 24 to 26 are newly added. Accordingly, claims 9 and 24-26 are pending.

II. New Claims

Applicant has added new claims 24-26. Applicant submits that these claims are fully supported by the specification as filed. For example, page 9 of the specification recites, "*N,N*-dimethyl-*p*-phenylenediamine as a starting material results in a TBO product composition comprised of peaks eight, seven, six, and five in the approximate ratios 33:5:5:1, respectively. Furthermore, page 10 of the specification recites, "Whereas *N*-dimethyl-*p*-phenylenediamine as a starting material results in a TBO demethylated product composition comprised of peaks six, five, three and two in the approximate ratios 33:5:5:1, respectively." Page 10 of the specification further recites: "Thus, oxidation of a reaction mixture containing the starting material, *N,N*-dimethyl-*p*-phenylenediamine

and/or *N*-dimethyl-*p*-phenylenediamine, and *o*-toluidine occurs before introducing a source of sulfur-containing nucleophile. The above modifications result in a wholly unpredicted composition of TBO product, one that maximizes the production of peaks eight and six, respectively."

In addition, Applicant notes that the new claims recite "*N*-methylphenylenediamine" not "*N*-dimethylphenylenediamine." Applicant submits that the use of "*N*-dimethylphenylenediamine" in the specification was an error, and one skilled in the art knows that since there is only one methyl substitution on this compound (as evidenced by the use of "*N*" as opposed to "*N,N*"), then the compound is *N*-substituted. Applicant submits that the use of "*N,N*-dimethylphenylenediamine" as the starting material results in a product that is primarily comprised of peak 8 (which has two methyl groups attached to an outer nitrogen, and as can be seen on pages 5-6; and the use of *N*-methylphenylenediamine results in a product that is primarily comprised of peak 6 (which has one methyl group attached to the outer nitrogen), and as can be seen on page 7. Accordingly, it follows that the use of a starting material having two *N,N*-methyl groups results in a compound having two *N,N*-methyl groups, and the use of a starting

material having one *N*-methyl group results in a compound having one *N*-methyl group. As such, the Applicant submits that the amendment to *N*-methylphenylenediamine is fully supported by the specification as filed.

II. Claim Rejections - 35 U.S.C. § 103

On page 5 of the Office Action, claims 2, 9, and 16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,086,852 ("Burkett") in view of Cannell, R.J.P., (Natural Products Isolation, 1998).

On page 3 of the Office Action, the Examiner recites:

"As applicant states, Burkett . . . teaches in columns 15-17 and figure 2, an HPLC purification of the dye composition resulting in a series of peaks. It is therefore clear from this figure alone that the dye compositions were prepared and purified yielding a pure form of the dyes in question, though the collection of the HPLC fractions containing the pure dyes was not specifically disclosed. The inventive step in both the instantly claimed application and the prior art was the production of pure formulations of the dyes of peaks 6 and 8. In these peaks, the dye contents are greater than 73%, or 70%, of the total organic dye content."

Further, Examiner recites: "Burkett . . . discloses . . . compositions of dyes having the same structure of the instantly claimed dyes I and II. Burkett . . . discloses the purification of these dyes by HPLC in figures 1 and 2 yielding individual peaks for each of the dyes, specifically peaks 6 (dye I) and 8 (dye II). The contents of these peaks comprise a mobile phase along with the purified dyes having at least 73% of the total organic dye content of the disclosed dye . . .".

Applicant respectfully disagrees. However, in order to expedite prosecution and not for reasons of patentability, Applicant has herein cancelled claims 2 and 16. Applicant reserves the right to pursue the subject matter of the cancelled claims in a divisional and/or continuation application. In addition, Applicant submits that nowhere in Burkett does it teach or suggest that the "disclosed dye" (i.e., peak 6) is at least 73% of the total organic dye content as recited in claim 9.

For example, Burkett does not teach or suggest that the N-demethylated derivative of toluidine blue O, peak 6, comprises at least 73% by weight of the total organic dye content of the composition. Applicant submits the neither Fig. 1 nor Fig. 2 discloses that peak 6 is a majority of the total organic dye content as Examiner alleges. Even if the percentages by weight of each of the peaks were extrapolated from the areas of the peaks of FIG. 1 or 2 in Burkett, they would not disclose that peak 6 is at least 73% by weight of the total organic dye content of the composition as recited in claim 9. For peak 6 to be at least 73% by weight of the total organic dye content, it must comprise a *majority* of the total organic dye content. However, upon review of Figs. 1 and 2, peak 6 clearly does

not comprise a majority of the organic dye content of the composition. For example, in Fig. 1, the area of peak 6 is 39.35, and the total area is $2.05 + 6.43 + 15.39 + 1.15 + 13.49 + 39.35 + 30.84 + 90.21$. Similarly, in Fig. 2, the area of peak 6 is 41.88, and the total area is $0.08 + 0.30 + 7.02 + 2.41 + 15.43 + 41.88 + 112.27 + 270.765$. Even if the area was extrapolated to determine the percentage by weight of the compound represented by peak 6, it would not be present as a majority of the organic dye content, as the area of peak 6 is much smaller than the areas of the other peaks. As such, Burkett does not teach or suggest that the N-demethylated derivative of toluidine blue O (peak 6) is at least 73% by weight of the composition.

Accordingly, Applicant requests that the rejection under 35 U.S.C. 103 be withdrawn.

On page 6 of the Office Action, the Examiner recites: "Burkett, U.S. Patent No. 6,086,852 does not disclose the combination of dyes 6 and 8 only in which they comprise at least 70% of the total organic dye content . . . Cannell, R.J.P., (Natural Products Isolation, 1998) discloses on pages 199 and 200 methods for collecting fractions of HPLC samples in which, given proper separation, as seen in

figures 1 and 2 of Burkett, U.S. Burkett 6,086,852, one can arrive at essentially pure samples of HPLC compounds . . ."

Applicant respectfully disagrees. However, in order to expedite prosecution, and not for reasons of patentability, Applicant has cancelled claim 16, accordingly, Applicant submits the rejection is now moot. Applicant reserves the right to pursue the subject matter of claim 16 in a continuation and/or divisional application.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending are in condition for allowance and such action is earnestly solicited at the earliest possible date.

In response to the Office Action mailed on June 18, 2009, Applicant hereby submits this Response. Applicant for the above-identified application respectfully petitions the Commissioner for a three-month extension of time, extending the date for response to December 18, 2009. Please charge our deposit account number 10-0440 in the amount of \$1,110 or any additional amount deemed necessary. The Commissioner is also authorized to charge any amounts due or credit any overpayments in connection with this matter to Deposit Account No. 10-0440.

Respectfully submitted,
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